

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number  
**WO 2005/082109 A2**

(51) International Patent Classification: Not classified

(21) International Application Number:  
PCT/US2005/006603

(22) International Filing Date: 28 February 2005 (28.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/547,969 26 February 2004 (26.02.2004) US

(71) Applicant (for all designated States except US): MASSACHUSETTS INSTITUTE OF TECHNOLOGY [US/US]; 77 Massachusetts Avenue, Cambridge, MA 02139 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BERNHARDT, Trout, L. [US/US]; 20 Chestnut Street #603, Cambridge, MA 02139 (US). WANG, Daniel, I., C. [—/US]; 271 Nahanton Street, Newton, MA 02459 (US). BAYNES, Brian, N. [US/US]; 125 Josephine Ave. #1, Somerville, MA 02144 (US).

(74) Agents: GORDON, Dana, M. et al.; Patent Group, Foley Hoag LLP, 155 Seaport Boulevard, Boston, MA 02210-2698 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

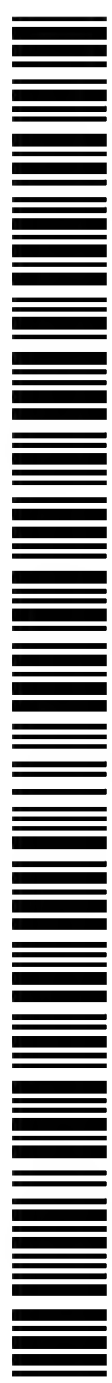
**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SOLUTION ADDITIVES FOR THE ATTENUATION OF PROTEIN AGGREGATION

(57) Abstract: In part, the present invention relates to a compound or polymer comprising a non-protein-binding moiety and at least one protein-binding group. The present invention relates to a method of screening compounds or polymers for the property of inhibiting protein aggregation in solution, a method of preparing a compound or polymer having the property of protein aggregation inhibition in solution, a method of classifying a compound or polymer as either inhibitory of protein aggregation in solution or not inhibitory of protein aggregation in solution, and to a method of determining the preferential binding coefficient,  $\Gamma_{XP}$ , of an additive in a protein solution. The present invention also relates to a method of suppressing or preventing aggregation of a protein in solution, a method of decreasing the toxicological risk associated with administering a protein to a mammal in need thereof, and a method of facilitating native folding of a recombinant protein in solution.



WO 2005/082109 A2